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MORAL INSTRUCTION IN SCHOOLS.*

LADIES AND GENTLEMEN:—The subject of public morals is always of the profoundest interest to all who have any regard for the securityof the commonwealth, and the safety and happiness of society. To so great a degree has the culture of morality been neglected in many of our public schools that the language of Thomas Fuller, penned more than a century and a half ago, seems as appropriate now as it was the day it was written:

"The good schoolmaster studieth his scholars' *natures* as carefully as they their books; and ranks their dispositions into several forms. And tho' it may seem difficult for him in a *great school* to descend to *all* particulars, yet experienced schoolmasters may quickly make a grammar of boys' *natures*, and reduce them all, (save some few exceptions,) to general rules. Our common education is not intended to *render* us *good* and *wise*, but *learned*: it hath not taught us to *follow* and *embrace* virtue and prudence, but hath imprinted in us their *derivation* and *etymology*."

There is a class of teachers who feel that the duties of their profession are exceedingly onerous; who desire that their vacations be as long, and their terms of service as short as possible; who are always punctual when pay-day arrives, but drag their slow feet to the schoolroom, as if going to a weary prison, or to the last resting-place of some dear friend; who take every occasion, and sometimes, upon the slightest pretense, make occasions, to rescue a half day or half hour from the tedious routine of duty. These teachers are not particularly desirous to be made acquainted with additional school duties which would not at all assist them in solv-

* Lecture before the State Teachers' Association, Madison, Wis., July 26, 1859, by E. P. Larkin, Principal of 2d Ward High School, Milwaukee.

ing the great problem of their lives, which seems to be how to get the most money for the least service; or, conversely, how to do the least service for their wages. There is another class of teachers who feel that they are perfectly competent for their position; they do not desire to change their course of instruction as to either method or scope. They have learned all about their business that they wish to know, and will thank no person to point out a new duty, or instruct them in the better performance of an old one. Such teachers are always found in positions far beneath their ability: indeed, they regard themselves as competent to perform the duties belonging to the highest degree of the teacher's profession. They treat with scorn any innovation upon their preconceived opinions, and regard any changes in school policy as inimical to their interests. This lecture is not prepared for either of the classes enumerated; but there remains a last class of teachers to whom these thoughts and reflections, such as they are, are addressed; and that class is made up of all those who, feeling the vast responsibility of the teacher's calling, and conscious of their own imperfections, and even inability, no matter what may be their qualifications, to fully perform their responsible duties, are willing to learn, from any and every source, aught that may assist them in better discharging these duties.

The true teacher, wedded to his profession, will make everything contribute to that profession; and will often have occasion to learn valuable lessons from the poorest scholar he may instruct. A teacher recently remarked that he often learned more in visiting a very poorly kept school, than one of the best grade, because he there detected his own faults of instruction, or government, which had previously escaped his closest scrutiny, brought out on a large scale. Teachers who are thus ever on the *qui vive* for something that shall contribute to their advancement, may not find the subject which we are about to introduce to their attention, entirely profitless. Our object is to awaken an interest in a direction hitherto untraversed, and in a department of instruction which has been greatly neglected.

Much as has been said and written upon the subject of education, we are aware, in but a single instance, of any systematic efforts in the department of oral instruction for common schools. Here, then, is a vast field for the teacher, open and mostly uncultivated. Many mistake the object for which the teacher labors, or should labor, and what renders him a successful teacher. They look upon the means as the end, regarding him as successful who makes proficient scholars in arithmetic, geography, grammar, philosophy, chemistry, or language; forgetting, or, at least, overlooking the fact that all the habits of the child are to be formed, his entire character moulded and fixed for life, while he is a child.

On this point we must not be misunderstood; we are not of those who believe that the natural sciences and higher mathematics, or any other studies, are to be introduced into the common school, to the exclusion of

the common branches. So far as letters are concerned, the main business of the common school is to teach reading and spelling, writing (both penmanship and composition), arithmetic, geography, and grammar; and any study which excludes or interrupts the thorough mastery of any one of these branches, in so far forth, is injurious to both school and scholar. Nor do we believe that the so-called "higher" branches can be introduced into our common schools, to any considerable extent, without inflicting the injury to which we have alluded. We have already had scholars enough in algebra, natural philosophy, history, and rhetoric, who could neither read nor reckon, and who would be puzzled with the simplest questions in geography. Whatever else he may accomplish, certainly, he who cannot, generally, teach the common branches successfully, is unqualified for the teacher's profession. But the difficulty is, that too many regard this as their whole business, and imagine that when it has been successfully accomplished, no further duty awaits them; as though a thorough knowledge of these branches were an end, either to scholar or teacher, and not a means to another and higher end. It certainly is not the end of human existence to read, or reckon, or understand grammar; and what of the child's other activities, his thoughts and his conduct, his character, his body and his soul, while he is acquiring these useful branches? Under the most sedulous care, but a small portion of the child's entire time will be devoted to study; and but a mere fraction of his thoughts and mental exercises will be about his lessons. But what of his other thoughts? Has the teacher nothing to do in directing *them*? What of his habits and character? Is the teacher to have no hand in guiding his pupil, and directing him onward and upward to a nobler manhood? Is it of no moment to the teacher that the child under his charge acquires a feeble or distorted physical constitution, as the result of bad ventilation of the room in which he is compelled to spend his early years, or through neglect of those physical exercises which ought to be practiced in every school? Or is it of consequence to direct the development of the physical system when it is most vigorous in its growth, but of no concern to direct the formation of the character, and the development of the moral constitution, when it also is the most formative, and, so to speak, fullest of the juices and vigor of youth? Teachers should not forget that their business is not to educate mathematicians, nor linguists, nor scholars in any direction, but to educate *men*. Perhaps it will help us in apprehending the duties of the teacher, to regard him for the time, precisely in *loco parentis*; and to consider that all the solicitude which a parent should feel for the generous and manly development of his offspring, is to be shared by the teacher.

It seems evident, then, that a course of oral instructions, should form an important and indispensable part of the curriculum of study, during the entire school life. It is impossible and undesirable to define here the various topics which these oral instructions should embrace. It is suffi-

cient to say that our subject constitutes one of the principal branches of these instructions. Our free school system is destined to develop and to succeed, so far as intellectual discipline and mental acquirements are concerned. The only danger which can possibly be apprehended, is the neglect of moral culture. "The human body may attain its noblest perfection of health and strength, the observation may be acute, the intellect profound, the imagination rich; and yet these varied and glorious powers be turned to evil. Strength may support tyranny, acuteness and depth raise up obstacles to truth, and imagination spend its gorgeous eloquence in the service of the basest vices." "The work is incomplete if the moral nature remains uncultivated. Physical and intellectual education aim at the perfection of the instruments which may become splendid implements of evil, if moral education does not succeed in regulating the power which is to use them." Channing seemed to regard this question of moral instruction in the same light when he said "The exaltation of talent, as it is called, above virtue and religion, is the curse of the age. Education is now chiefly a stimulus to learning, and thus men acquire power without the principles which alone can make it good. Talent is worshiped; but, if divorced from rectitude, it will prove more of a demon than a god."

We do not say that the moral nature should be cultivated alone. That were to oscillate to the other extreme. Nor does our danger lie in that direction. "Upon this subject," says Bishop Potter, "another and not less pernicious error is to to mistake for education a partial, narrow culture, which operates on but a part of the mind. In some instances the moral nature is addressed, to the exclusion of the intellectual; but much more frequently the intellectual powers are fostered, to the grievous neglect of the spiritual and moral. The child is dealt with, not only as though these two classes of powers were separate and independent of each other, which is a great mistake, but as if one class could be safely aroused and enlisted into action, while the other remains dormant. Under the reign of scholastic philosophy, a discipline which developed the reasoning faculty and cultivated the study of theology, took sole possession of places dedicated to education. In our own age we have passed to the opposite extreme. Unbounded pains are now taken to enlighten a child in the first principles of science and letters, and also in regard to the business of life. At a time, too, when an intellectual has been substituted for a physical supremacy, and results are produced almost entirely by talent and address, it is thought an object of vast consequence to develop mental energy and activity. In the mean time, a culture of the heart and conscience is often sadly neglected, and the child grows up a shrewd, intelligent, and influential man, perhaps, but yet a slave to his lower propensities. Talent and knowledge are rarely blessings either to their possessor or to the world, unless they are placed under the control of the higher sentiments and principles of our nature. Better that men

should remain in ignorance, than that they should eat of the fruit of the tree of knowledge, only to be made more subtle and powerful adversaries of God and humanity."

Let us specify more particularly some of the reasons why good moral habits should be formed in children. And first, some moral character will be taken on. No greater mistake can be made by the teacher than to suppose that because he is not teaching well, he is, therefore, not teaching at all; or that the children under his guidance, although not improving in morals, are, at least, growing no worse. The plastic mind will assume habits, and as the molten brass can be cast into any form while in a state of fluidity, but, if neglected, will harden into a shapeless mass, so the impressible character of childhood, ready to be bent and directed, influenced and controlled by the skillful teacher, if neglected by him, will as surely be directed by other influences, and finally become fixed as they shall determine. Every word spoken in presence of the child, pleasant or otherwise, every harsh look and action, as well as every gentle and approving smile, every oath and prayer which the child hears, are all so many moral educators, constantly determining his future character; and when we consider the vast preponderance of evil in the world—the probability that evil influences surrounding childhood will greatly outnumber the good, then the necessity of the most unremitting moral culture becomes painfully apparent. "Vice," says Seneca, "we can learn ourselves, but virtue and wisdom require a tutor. "Secondly, the habits contracted in childhood and youth are very apt to be permanent. Men everywhere suffer from evil habits contracted in early years. Like the mountain torrent, they go on increasing in volume and force until in after life they become irresistible; and it often happens that more reliance is to be placed upon the force of custom, both for good and bad purposes, than upon any other element in a man's character. Lord Bacon's thoughts upon this topic are worth transcribing, and the more so, because what he asserts of society in general, is all the more true when referred to that most formative of all society, the school. "Men's thoughts are much according to their inclination; their discourse and speeches according to their learning and infused opinions; but their deeds as they have been accustomed; and, therefore, as Machiavel well noteth, (tho' in an evil favored instance,) there is no trusting to the force of nature, nor to the bravery of words, except it be corroborate by custom.

His instance is, that for the achieving of a desperate conspiracy, a man should not rest upon the fierceness of any man's nature, or his resolute undertakings, but take such an one as hath had his hands formerly in blood; but Machiavel knew not of a friar Clement, nor a Ravillac, nor of a Baltazar Gerard. Yet this rule holdeth still, that nature nor the engagement of words are so forcible as custom. The predominancy of custom is everywhere visible, inasmuch as a man would wonder to hear men profess, protest, engage, give great words, and then do just as they

have done before, as if they were dead images and engines, moved only by the wheels of custom.

Bacon's examples are also in point. Custom compels the wives of the Indians to burn themselves upon the funeral pyre of their husbands; and the lads of Sparta were wont to be scourged upon the altar of Diana without so much as squeaking; and an Irish rebel of Queen Elizabeth's time put up a petition to be hanged in a withe, and not in a halter, because it had been so used with former rebels. Many examples may be put of the force of custom, both upon mind and body; therefore, since custom is the principal magistrate of man's life, let men, by all means, endeavor to obtain good customs. Certainly, custom is most perfect when it beginneth in young years; this we call education, which is, in effect, but an early custom.

So, we see, in languages the tongue is more pliant to expressions and sounds; the joints are more supple to all feats of activity and motion in youth than afterwards, for it is true that late learners cannot so well take the ply. But if the force of custom, simple and separate, be great, the force of custom, copulate, and conjoined, and collegiate, is far greater; for their example teacheth, company comforteth, emulation quickeneth, glory raiseth. So, as in such places the force of custom is in its exaltation, certainly, the great multiplication of virtue upon human nature resteth upon societies well ordained and disciplined; for commonwealths and good governments do nourish virtues grown, but do not much mend the seeds."

If the habits and customs, the intellectual and moral character of the man, are to be determined by his early discipline, the world, humanity, has a right to demand that such instruction and discipline be good; and thirdly, the world does demand an advanced state of morals in the rising generation. We cannot ignore the claims of humanity. The toiling millions have a demand upon the enlightened youth of christian nations to relieve them of their heavy bondage—a bondage two fold—physical and moral, and to be relieved by first unbinding the heavy burdens upon men's shoulders; that is, by relieving the world of the vast amount of drudgery now necessary to support life, by compelling the powers of nature to perform the mechanical labors which now engross the whole existence of the great majority of mankind. This is the appropriate sphere of science; and thus, by elevating humanity from their intellectual and moral degradation, freeing them from that servitude to appetite and passion, to sin and folly, to sensuality and vice, which is a thousand fold more crushing and disastrous to human intellects and welfare than any physical bondage can ever be. Humanity has a claim upon the rising generation to fulfill these missions; but unprepared and incompetent will the youth of this generation be to discharge such holy trust, unless morally as well as intellectually educated.

Says Dr. Humphrey: "It must strike every one who is capable of

taking a just and comprehensive view of the subject, that the common idea of a good education—of such an education as every child in the State ought to receive—is exceedingly narrow and defective. Most men leave out, or regard as of very little importance, some of the essential elements. They seem to forget that the child has a conscience, as well as an intellect. If they do not lay too much stress on mental culture, which is scarcely possible, they lay, by far, too little upon that which is moral and religious. They expect to elevate the child to his proper station in society, to make him wise and happy, an honest man, a virtuous citizen, and a good patriot, by furnishing him with a comfortable school-house, suitable class-books, competent teachers, and, if he is poor, paying his quarter's bills, while they greatly underrate, if they do not entirely overlook, that high moral training, without which knowledge is the power of doing evil rather than good." "A more Utopian dream never visited the brain of a sensible man, than that which promises to usher in a new golden age by the diffusion and thoroughness of what is commonly called 'a popular education.' With all its funds, and improved school-houses, and able teachers, and grammars, and maps, and black-boards. such an education is essentially defective. Without moral principle at its bottom to guide and control its energies, education is a sharp sword in the hands of a practiced and reckless fencer. I have no hesitation in saying, that if we could have but one, moral and religious culture is even more important than a knowledge of letters; and that the former cannot be excluded from any system,of popular education without infinite hazard. Happily, the two are so far from being hostile powers in the common domain, that they are natural allies, moving on harmoniously in the same right line, and mutually strengthening each other. The more virtue you can diffuse into the hearts of your pupils the better they will improve their time, and the more rapid will be their proficiency in the common studies."

To be Continued.

FALSE EDUCATION OF GIRLS.

In the publicly much lauded and privately much despised days of our grandmothers, I suppose there was a time when such things as girls and young women were often to be seen, when, if we are to believe modern story-tellers, the maidens were all beautiful, and wise and good; good spinners of wool, and flax. and tow; good weavers; good cooks. I believe if any one were to search our towns and villages as Jerusalem of old was said to be searched, with lighted candles, the species would be found yet extant: but no one who does not make careful search will be likely to find anything belonging to the genus, except young ladies and

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old maids. Boys, especially in the country, are not quite so scarce, but they are growing more and more rare. The niche they used to fill in the highways and byways of every day life is being filled by young gentlemen and "Young America." I don't know how much better things were in the days of my grandmother. I suppose she did not weep over the sorrows of Aunt Chloe and Uncle Tom, nor shed tears over the death of Evangeline St. Clair, or Paul Dombey; but it is quite as probable that she did not read the Atlantic Monthly; and if she was not silly enough to waste her time over the New-York Ledger, she never read the New-York Tribune; and I have a suspicion that, although she did know nothing of such imaginary affections as those of Tom Pinch for darling little Ruth, or of Eliza for baby Harry, yet she was not unacquainted with the loves of Alonzo and Melissa, and of Paul and Virginia, and with the griefs of the Children of the Abbey—which one, at least, of her granddaughters is, except by hearsay.

Of modern young ladies, Dickens will tell of a dozen, all of whom, except two, might change minds and no one be able to discover the difference; and, of these two, one is a spectacled, sharp nosed old maid, and the other is the wife of a miserable man, (who suffers for good dinners and buttons,) and the mother of four daughters, all intent upon the great end of woman's life, matrimony, the forlorn hope of which simpers out every time she meets an unmarried man.

Healthy, useful young women there are, and that there are so few is the fault, not so much of the persons themselves, as of their educators. Wise men have spent breath, and worse than wasted ink and paper, in trying to show that a woman of a really strong, healthy mind cannot fill well her peculiar sphere in life. As if knowing the difference between a Latin verb and a mathematical proposition were to unfit her for domestic life, or render her hand less cooling to the fevered brow of sickness; or as if inquiring earnestly into the principles of political economy were to deafen her ear or harden her heart to the cry of the needy or sorrowful. There has been an endless amount of twaddle about educating the head at the expense of the heart, the affecting and interesting beauty of woman's helplessness. Poets sing with love-lorn pathos of "household gods," and "characterless women," and novel writers are always prating of fainting angels in silks and satins. Household gods you will find only in poetry, and characterless women you will meet, flatter, despise, every day; but, inasmuch as there is no sickness in Heaven, Seraphim are supposed not to faint.

Girls are taught by word and practice, by precept and example, that the best and highest end of their earthly existence is to become a parlor ornament, and even as a parlor ornament she must not do her best. If you select a flower, a picture, or a statuette for your parlor table, you do not look about for a pale, withered, drooping rose; you do not seek an insipid, expressionless picture, and your statue must be perfect of its sort. The

cheek of your Hebe must be full and round, the body must be perfectly modeled, and the limbs be chiseled to complete development. But the young lady you put there must not wear a full cheek, lest it blush too deeply; her limbs and body must not be brought to shapeliness and beauty, lest she be indelicate. In short, and in plain English, she must not be vulgarly well. I know that now, since common sense is really getting fashionable, since the upheaving of that great wave of public sentiment, the spray and foam of which is known as the woman's rights movement, the theory is changed, but not so the practice. Now, it is true we are all joining in the chorus, and blaming the young woman for being the weak, useless, sentimental creature she has by her education been almost forced to become. Scarcely a monthly makes its appearance, and the weekly periodicals are getting scarce, wherein does not appear an article on The Rights of Woman, The Education of Females, Ought Women to Learn the Alphabet, Woman and her Influence, Woman and her Sphere. All this has given, and is giving rise to a new state of affairs, and there is no doubt that the remedy is begun. To help this on somebody sings:

"My lady is tired to death;
She has studied the print of a gay velvet rug,
And given her dear darling poodle a hug,
And from her bay window has noticed the fall
Of a ripe nectarine from the sunny wall;
She 's embroidered an inch on some delicate lace,
And viewed in the mirror her elegant face;
Has looked at an album, a rich *bijouterie*,
Then restlessly owned herself dead with *ennui*.

"And my lady is tired to death,
Exhausted. It 's strange, that as day after day
Of her frivolous life passes slowly away,
So aimless and stylish, so empty and fine,
So free from those duties sometimes called divine,
That she wearies of something, she scarcely knows what,
Thinks of, not what she is, but what she is not,
Oh no, all emotions are vulgar, you know,
And my lady's have always been quite *comme il faut*."

And no wonder she is tired to death. So would you and I be. But if her husband or father have money enough to be able to clothe and feed her in her elegance, let her presume to attempt a change if she dare; and if she have been born with the retiring modesty we can but love, then woe betide her future peace. Let her make her own dresses, and wash her own dishes, and her name will be repeated in every parlor, and will be in the mouth of every man within hearing of the report, sometimes to

praise, no doubt, but more often to ridicule, and sometimes to blame. Or if she have larger desires, let her apply her mind to study, let her attempt to teach, let her lift her pen as an authoress, and straightway she is one of your strong minded, a blue stocking, a despiser of her lot. Let her presume to be decided in her own opinions, theological, political, economical, and especially if she be a little peculiar in her views, she may be thankful if her name is not sounded in the newspapers. Some breakfast-table professor will tell you that it does seem that she has elevated and dignified herself, and that it seems rather strange that an intellectual man should find it no longer possible to love her.

Female Seminaries, Ladies' Boarding Schools, and, of late, a frothy kind of institution known as Ladies' Colleges, are in vogue. where a young woman can finish mathematics, learn French, study German, get a smattering of Latin, a tolerable idea of most of the sciences, and some general knowledge of theology, all in the course of four or five years. Besides all this, she must take lessons in music and painting; and for the part the world wishes young women to act, these are just the schools needed. Let me here offer my meed of praise to that mother of schools for ladies in our country. God has set his seal upon the labors of Mary Lyon, and around his throne to-day are many redeemed souls, who, no doubt, hail her as the means He has been pleased to use for their salvation; and until the records of time are closed her influence for good will not cease. Scattered here and there through our country, are teachers, high minded, true, noble, and earnest, whose *alma mater* has been some school founded upon her model; but those of us who have been behind the scenes know very well that these are the exceptions. We know that now, at least, the great mass of those who graduate from these schools come out with a clear idea of very few of the whole course of studies. And, worse yet, they come out with false, degraded, unjust ideas of life. Instead of regarding their school-days as moments for precious garniture, they look upon them as making up a term of imprisonment, over which it is the best thing they can do to get with the least amount of work, and the greatest amount of stolen pleasure. The fault is, probably, not often in the teachers. It is in the system itself, and, more generally still, in the needs of the persons to be educated. The fact is, they are not getting their education to use it. They are getting over so many years of school, and getting ready to commence their real business in life—getting "tired to death" doing nothing.

In an institution of which I was once for a short time a member, young ladies were permitted to take the same course of study which gentlemen were; and this was substantially the same as that pursued in other colleges. Those who joined this school were expected to take the same lessons and the same part in recitation which gentlemen did, and a goodly number were always found who could and would do it. But they were from the length and breadth of the land. They were from among those

who foresaw that they must make their education the instrument by which to procure their future daily bread; who had determined to make the most of the the talents God had given them; those to whom domestic life might come by and by, a blessing to be accepted and used, to be only another opening for work in the vineyard of the Lord, and not as the great end of their being, not as the only desirable good. Quite often some young lady who could "just as well take along six studies as three," who thought that Heaven and matrimony were synonomous terms, or who "enjoyed" delicate health, left for some ladies' school. They were only to be pitied. Their mothers had stitched dresses, and baked cakes, and given lessons about being ladylike, and genteel, and delicate, from the day they first longed for a good romp in the woods, till now; not, of course, with the avowed intention of making them unhealthy in mind and body, but the direct tendency of which was such.

Mothers still are doing just so; and you, if you are a parent, are probably giving just such instruction to your daughter as will make it necessary, if she be sent to school at all, that she shall be sent to a Ladies' School. You may, perhaps, send her to the public school so long as she is blind to the fact that she is a young lady, and not a little girl; but if she finds a teacher who is not willing to excuse her from some recitation about once a day, and from school about once a week, because she has the headache, or the finger ache, or some other ache, you will have to take her out. You will send your oldest boy Dick to school, because, as soon as he is old enough, you intend he shall learn a trade, in order that he may earn a decent livelihood, and you do not wish him to be an ignorant mechanic. You will send your eldest daughter because everybody goes to school now-a-days, and she must learn to read and write before she is old enough to get married. You will send Harry because he loves his book, and you wish him to acquire a profession and make a useful man; and you will send Mary because she loves her book, and is not good far anything else; you don't believe she ever will get married. You will send Tommy because you mean to give him the old farm, and even farmers need an education in this day of newspapers. But you will send Belle to see if she cannot be taught to be a little less hoydenish; if not, she will never get married. You will take the New-York Tribune and the Scientific American for the boys, that they may be intelligent and keep up with the times; and you will take Godey's Lady's Book for the girls, that they may get patterns for embroidery, and keep up with the fashions.

We rejoice that an attempt towards a remedy is being made. The applications of "Tired to Death," and "Nothing to Wear," are wholesome, no doubt, and rather caustic, but, unfortunately, they, and most of the other remedies yet in use, are directed against the effect, and not the cause; and, until the cause is removed, efforts toward a radical cure, though not utterly fruitless, will be of little avail. The cause is, in itself,

apparently futile, but the disease is deep. Women are, in spite of theories to the contrary, too generally physically weak; and then it is vastly easier to feel that God and our fellow creatures have taken responsibility and necessity for action out of our hands, and that we are fulfilling our destiny by gently smiling upon the labors of others, than it is to feel that humanity and christianity are laying burdens upon us which we can only carry by earnest, industrious effort. We, as teachers, can do something to bring about a more healthy state of things. We can show young women that we think ignorance and stupidity a disgrace; that laziness is not interesting illness; that it is full as genteel to know who is the Vice-President of the United States, and to know latitude from longitude, as it is to have the nervous headache; that it is more ladyiike to help bind up a bleeding wound than it is to faint away; that cheeks painted by health are more beautiful than those painted by rouge. We can show them that the investigation of a mathematical question is as well worthy of an immortal mind as the most intricate stitch in crochet. Henry Ward Beecher wonders where the good earnest working men come from. I wonder where the good, intelligent, industrious women come from. That women of middle age are so generally sensible, useful, worthy persons, only proves that there is, after all, in the female mind an under stratum of good sense, which only needs to be kept clear from the rubbish of affected weakness and morbid sentimentality that the earth may be blessed with wholesome and whole-souled common sense young women and girls. No longer then will rise the wail:

"Still my lady is tired to death;
Oh woman, false woman, false mother, false wife,
What account can you give of your poor wasted life;
Of that life that has passed like a feverish dream,
The life that has not been *to be*, but to seem;
What account will you give in that awful last day,
When the pomp and the show of the earth pass away,
When the Master demands of the soul he has given
A stewardship rendered on earth and in Heaven?

"Tired to death.
Cast off for a moment your diamonds and lace,
And shine in the light of true womanly grace;
Look around you and see, with eyes raised to the light
Strong men and true women, who live for the right,
Brave hearts that ne'er falter, though distant the goal;
Great lives whose fierce struggles will never be told,
Whose wild straying hearts stern duties control,
Whose only true life is the life of the soul."

THE TRUE ORDER OF STUDIES.

BY REV. THOS. HILL, WALTHAM, MASS.

(Continued from the July Number.)

In our former articles we gave a general view of the whole field of education as it presents itself to us. We propose, now, to take it up more in detail, and, in the present article, to treat particularly of mathematical studies. But, before we begin the discussion of the special subject, let us briefly recapitulate the general views, which lead us to assign this special study a primary place in education.

A child's will, under the guidance of reason, and at the impulse of passion or feeling, manifests itself through a physical organization. A fourfold education is therefore needed. It is essential that the body should be in good health, and that its powers, both of perception and action, should be trained to promptness, accuracy, and efficiency. It is necessary that just sentiments and pure emotions should be fostered, evil passions and wrong desires repressed. Nor can we neglect the enlightenment of the reason and the training of the logical powers. Least of all will a true education fail to give energy and purity of purpose to the will.

Now, these four modes of education,—the religious, which directs and strengthens the will, the intellectual, which informs and develops the reason, the moral, which cultivates the taste and restrains the passions, and the physical, which exercises the senses and develops the muscles,—must be carried on together, and not one of them can be neglected with impunity by those intrusted with the education of youth, whether in the nursery, the school, or the college.

Again, there are three sets of intellectual powers,—the perceptive, the conceptive, and the logical. All knowledge rests on a double basis of perception and conception; but perception logically precedes conception. The powers of imagination and reasoning are developed through the exercise given by observation; hence the natural order of education would be, to teach, first those sciences most dependent on observation, and lastly those most dependent on consciousness. Now, this order will lead us first to mathematics, the science in which consciousness plays the least important part; for, although our ideas of time come from inward observation, and are thus partly derived from consciousness, the idea of space, which is the more important element in mathematics, is wholly from without. But in no other science is there any idea which is wholly free from dependence upon our own consciousness of power. Geometry is thus shown to be naturally the first study of a child; it is of all studies least dependent on intuitions, and therefore is best adapted for the unde-

veloped mind. But geometry and the mathematics in general have a higher claim to be the first study of a scholar than their mere adaptation to the weakness of the inexperienced student. They are the necessary prelude to the understanding of other sciences. It must at all events be conceded that a minute and thorough acquaintance with mathematical principles is a necessary part of any successful preparation for the study of physics. Geometry or the calculus is the Ithuriel's spear which is able to make a plausible physical theory assume its true appearance of falsehood and deformity.

But, among the various branches of mathematics, which takes precedence in time? Which comes first in the order of study,—geometry, algebra or arithmetic? Beyond all controversy, we must say geometry. The idea of form is the first of all ideas, on which any science has been founded, to enter the child's mind. The child learns to recognize innumerable objects by their shapes, many months and usually even several years before it is able to count. What stronger testimony could Nature bear to the propriety of teaching geometry before arithmetic? We may also remark that the history of the race confirms this view of the proper succession of mathematical studies. Geometry had made great advances while yet arithmetic was but partially developed, and algebra had not yet been invented.

A young child, whose attention is easily arrested by mere differences of figure, will usually prove an apter scholar in geometry than an older child whose mind has become partially accustomed to abstract thought, and whose attention is not so readily fixed on differences of simple outline. We have, for the sake of testing this view, given isolated experimental lessons to children of various ages, and to the same child at various periods of life; and, although we have not kept any such precise record of these experiments as their importance deserved, we have been convinced that they sustained our theory. A boy of fifteen, who has never studied geometry, is not so well prepared to study it as he was at the age of ten. Of course we do not mean that a child under ten years of age is capable of following geometrical demonstrations; this would be contrary to all our philosophy of the subject. The powers of reasoning required in geometrical demonstrations are not developed until four or five years later.

One great cause of the neglect of geometry in our primary school education is, doubtless, to be found in this false view of the study;—that it is simply a logical drill. Even many of the admirers of mathematics, pleading for the use of geometry in education, take this view of the study, that it is a means of developing the power of continuous thought and consecutive reasoning. Thus, also, in Sir William Hamilton's argument against the study, he contents himself with showing that other sciences afford better training for the powers of logical thought.

But the powers of observation and the powers of imagination or con-

ception are as important as those of reasoning; and the great value of geometry for the young child is the stimulous which it gives to the habit of exact observation, and to the power of clear, definite conception. In order to produce this beneficial effect upon a child's mind, it must, however, be presented in a form adapted to his powers, and to his natural modes of thought. We have found, in our own experience, nothing better, for the first lessons, than the little bricks described by Miss Edgeworth. We do not refer to the blocks of various shapes which may be ordinarily found in the toy-shops. Those described in "Frank" are much better,—rectangular parallelopipeds, whose dimensions are in the ratio 1 : 2 : 4. Those which we have had manufactured and placed for sale with Messrs. Holden & Cutter, Boston, are of birch or maple, two inches long, one inch wide, and half an inch thick. When made with care, exactly in these proportions, and provided with a small percentage of blocks having the same width and depth, but of the length of one inch and of four inches, they furnish the means, not only of inexhaustible amusement, but of valuable intellectual development. They should be in the hands of a child from the time he is eighteen months old to the age of ten years. The child must be taught to lay these bricks exactly, breaking joints, binding courses together, and so on, as in real brickwork. The variety of structures, all beautiful and symmetrical, which an ingenious boy of ten years old will make with a hundred of these assorted blocks would astonish the uninitiated. Square and circular buildings, pyramids, crosses, gateways, columns surmounted by crosses, and natural arches of various forms, may be combined in a variety of modes. For the building of real arches, centerings must be provided, and also a substitute for mortar in the shape of numerous little keystones or wooden wedges, one of which is to be inserted in each joint of the arch before the centering is removed. It will be apparent that this play cultivates the imagination, as well as the observing powers, and leads, under the guidance of a teacher, to habits of precision, in observing, and in acting.

The second means of geometrical education is to be found in the Chinese tangram, or geometrical puzzle. This consists in giving a child the outlines of a figure, and requiring him to form the figure by placing together a given number of pasteboard triangles. Outlines should at first be given which may be formed by placing together two or three triangles, and the complexity of the outlines may afterwards be increased so as to require as many as seven pieces of pasteboard. These puzzles are adapted for children of the age of from four to twelve years. They cultivate the power of exact observation, and of the rapid analysis or dissection of forms.

When the child is able to analyze figures composed of three or four triangles, which may be at the age of from six to eight years, he will be ready for geometrical truth in an abstract form of words; but great care must be taken that he do not learn to say the words by rote. The great

value of geometry to a child of that age lies in the power which it may give him of building a clear and precise image, in his mind, of that which he has not actually seen. Care must also be taken not to attempt to make him understand the proof of the position which you announce to him; let him receive it on trust as food for his imagination, and not attempt to establish it as a datum for reasoning. If the child asks for proof, and the demonstration is fully within the grasp of his mind, it may be well to give it to him; but there are few children under ten years who are capable of understanding the simplest geometrical demonstration. On the other hand, there are primary schools in Waltham in which scores of children under ten years of age have been made thoroughly acquainted with the leading truths of the geometry of the triangle and the circle; many, also, under the age of twelve, who have obtained a clear knowledge of the relations of the cycloidal curves to their evolutes, and of some of the principal theorems concerning conic sections and the catenary curve. The value of this knowledge to these children will be manifold. It has already afforded to each of them an excellent culture of the power of clear perception; it has enlarged their sphere of thought, and linked the highest mathematical truth with their playthings,—the hoop, the swing, the jumping-rope, and the ball; it has made them partakers in the fruit gathered by the highest spirits of our race. This clearness and precision of observation and of conception will be of use in every occupation of life, and render their testimony and their judgment of more value to themselves and to other men; even the powers of the eye and of the hand will be more likely to receive an accurate self-culture, for use in the mechanic arts, from this imposed culture of the geometrical imagination. And if there be, among the children thus early furnished with the germs of this science, any scholar whose natural gifts peculiarly fit him to advance its progress, or to use to advantage the higher mathematics, there is nothing which could more surely lead him to application than to give him the the curious and interesting results which have been attained by the application of others. As the imagination is stimulated to action by the visible forms of nature, so is the reason stimulated to action by the creations of the imagination. The sight of a hanging chain, for example, stimulates the imagination to conceive of the curve line formed by a chain of infinitely small links. This conception arouses the logical powers to inquire into the relations of the parts of such a curve to each other. A boy of ten years old, playing with a chain fence, may be taught, and may, by his muscular power, roughly test the truth of the assertion, that the horizontal tension of a chain is equal to the weight of a piece of chain equal in length to the radius of curvature of the lowest point of the curve; and may easily draw the corollary that no amount of power can draw a flexible thread horizontally *perfectly* straight. The

marvelousness of this corrollary will fix the theorem ineradicably in his remembrance; and, if he be a boy of mathematical power, he will, years afterwards, when he takes up the demonstrations of geometry, wish to know the proof of the proposition. But he will find that simple geometry is not enough. He takes up algebra, and applies it to geometry, but the theorem is still too dificult; he adds the resources of trigonometry, but is no nearer the proof that he desires. He enters college, and learns the marvelous uses of Descartes' co-ordinates, but this simple problem is beyond the reach of their magic. Finally, his curiosity, aroused so many years before, is gratified when in his senior year he has learned something of Leibnitz and Newton's Calculus, and something of the Analytical Mechanics of Lagrange, and takes up the discussion of the catenary curve. Nor does the student who has early learned such truths come to these studies under the same disadvantages as ordinary scholars. The young men of our colleges, when entering on the study of higher curves, have a two-fold difficulty, that of mastering the conception of the curves, and that of mastering the use of the analytical instrument by which they are investigated. But when the student has already a knowledge of the curve, and an ease in producing geometrical pictures before his fancy, he can bend his whole force upon the mastery of the analytical instrument.

To be Continued.

SPIRIT OF THE PSALMS.

Among all compositions, these alone deserve the name of sacred lyrics. These alone contain a poetry that meets the spiritual nature in all its moods and in all its wants—which strengthens virtue with glorious exhortations, gives angelic eloquence to prayer, and almost rises to the seraph's joy in praise. They resounded amidst the courts of the tabernacle; they floated through the lofty and solemn spaces of the temple. They were sung with glory in the halls of Zion; They were sung with sorrow by the stream of Babel. Chorused by the winds of Heaven, they have swelled through God's own temple of sky and stars ; they have rolled over the broad deserts of Asia, in the matins and vespers of ten thousand hermits. They have rung through the deep valleys of the Alps, in the sobbing voices of the forlorn Waldenses; through the steeps and caves of Scottish Highlands, in the rude chantings of the Scottish Covenanters; through the woods and wilds of primitive America, in the heroic hallelujahs of the early pilgrims.

Superintendent's Department.

OPINIONS, ETC., FROM THE OFFICE OF THE STATE SUPERINTENDENT.

(*Continued from the July Number.*)

ALTERATION OF PROCEEDINGS.

Q. Can a Special Meeting alter any of the determinations of the Annual Meeting?

A. In some cases; but not to vitiate existing contracts. School District meetings are authorized to alter, repeal, and modify their proceedings, as occasion may require. This must be taken in connection with other parts of the law, and must be understood as granting only a conditional power; for, whenever *contracts have been entered into, liabilities incurred,* or expenditures of money actually made, in the prosecution of any measures directed by the district, a repeal, alteration, or modification of such measures *will not be sanctioned,* as no means exist to indemnify those who may be losers thereby. This is the substance of a decision by Judge Wright, former State Superintendent. So long as the matter is entirely in the hands of the district, they may modify their action as they see fit; but after it has wholly or partially passed into the hands of a third party the district will be held to a strict fulfillment.

POWERS AND DUTIES OF OFFICERS.

Q. If the Clerk neglects to hire a teacher, can the Treasurer do so?

A. He can not. The law expressly makes it the duty of the Clerk to hire teachers—that is, to contract with them in the name of the district. The law does not authorize any other person to thus bind the district.

Q. In case no direction is given at the Annual Meeting in regard to the length of school, for how long a time can the Board hire a teacher?

A. For three months, and no more. They are empowered to do this that the district may not lose its apportionment through their neglect; but they have no authority to do more than this.

Q. Can a person who has not been in the State long enough to be a voter, hold office in a school district?

A. There is nothing in the law to prohibit a person's holding office until he becomes a voter, but there is a manifest impropriety in it.

Q. Will a failure on the part of the Town Superintendent to give the proper notice of the alteration of a district vitiate the alteration?

A. Such a defect may be remedied by the endorsement of consent by the Board upon the order of alteration, which will waive all informalities. Any such informality will not be held sufficient to vitiate the action of the Town Superintendent, unless it can be made to appear that such neglect worked to the positive injury of one of the parties, or that a protest was entered against such informal proceedings. It is always advisable to proceed in strict conformity with the law, but merely technical objections will not be held sufficient to render void acts in themselves unobjectionable.

Q. Can officers hire a teacher with the understanding that he shall board around?

A The contract must state a specified price, and the teacher must attend to his own board. If an arrangement can be made mutually satisfactory, the teacher can board around. The Board cannot force the teacher upon the people, nor can the teacher demand that the people shall board him.

Q. In case of a joint district, how should clerks make out their report so that they shall not be duplicated?

A. The only two points in which it is necessary to guard against duplication are in reporting the number of children, and moneys received. The report should be in the following form:—

Children in the town of M.,—Males ——. Females ——.

Children in the town of N.,—Males ——. Females ——.

And the same form in reporting moneys:—

Received from A. B., Superintendent of Town of M., $——.

Received from C. D., Superintendent of Town of N., $——.

and then the Superintendent of each town will enter in his report only those portions of the report relating to his town.

Q. Under the present School Law, have districts the power to grade their schools?

A. They have the power to grade their district schools, and employ teachers in the different grades, or districts, and may unite and form Union High Schools. The former course is preferable in most cases.

TAXES.

Q. Can taxes voted at the annual meeting be collected by the District Treasurer?

A. They can not. The law of 1849, which is now in force, applies only to taxes voted at a special meeting.

Q. Has the Town Treasurer any authority to receive Town Orders in payment of district taxes?

A. He has not; and if he does thus receive them, he must pay the *money* to the districts upon demand. Town orders are applicable only to town taxes. District taxes must be paid in cash, and kept separate from all other taxes.

Q. Can the Town Treasurer assess the district taxes with other taxes?

A. He can not. They must be assessed in a separate column.

S. H. CARPENTER,

Assistant State Superintendent.

DISTRIBUTION OF WEBSTER'S DICTIONARY.

Bad Ax Co.—Harmony 4; Union 3; Bergen 3; Greenwood 4; Clinton 3; Whitestown 2; Hamburg 2; Forest 4, ... 25

Brown.—Holland 2; Glenmore 3; New Denmark 4; Rockland 4; Howard 4, 17

Buffalo.—Belvidere 1; Maxville 3; Cross 3; Alma 3; Naples 4, ... 14

Calumet.—Harrison 5; Rantoul 2; Brillion 2, ... 9

Clark.—Pine Valley 3; Lewis 3, ... 6

Columbia.—Columbus 3; Lowville 2; Scott 2, ... 7

Crawford.—Freeman 7; Scott 12; Wauzeka 6, ... 25

Dane.—Berry 1; Dunn 1; Perry 3; Burke 1; Black Earth 2; Madison 2, .. 10

Dodge.—Beaver Dam 1; Chester 1; Le Roy 1; Portland 1; Ashippun 1; Westford 1, ... 6

Door.—Gibraltar 4; Liberty Grove 1, ... 5

Douglas.—Superior 2, ... 2

Dunn.—Dunn 5; Spring Brook 5, ... 10

Fond du Lac—Rosendale 1; Spring Vale 1; Forest 1; Eldorado 1; Fond du Lac 6; Osceola 5; Metomen 2; Alto 2; Byron 2, ... 21

Grant.—Potosi 3; Blue River 3; Clarno 2, ... 8

Green.—Jefferson 5; Monroe 5, ... 10

Iowa.—Mineral Point 3; Mifflin 3; Linden 2: Waldwick 3; Pulaski 7, ... 18

Jackson—Irving 3; Hixton 3; Northfield 2; Bristol 7, ... 15

Jefferson.—Aztalan 3; Jefferson 1; Concord 2, ... 6

Kewaunee.—Carlton 4, ... 4

Kenosha.—Kenosha 7, ... 7

La Crosse.—Jackson 3; Holland 4; Onalaska 4; Farmington 4; Bangor 4, . 19

La Fayette.—Belmont 4; Center 2; New Diggings 1; Argyle 3; Wiota 3; Benton 1, ... 14

La Pointe.—La Pointe 1, ... 1

Manitowoc.—Two Rivers 3; Mishicott 5; Gibson 1; Cooperstown 4; Franklin 5, ... 18

Marathon.—Mosinee 1; Jenny 2, ... 3

Marquette.—Buffalo 3; Springfield 4; Oxford 1, ... 8

Milwaukee.—City of Milwaukee 12, ... 12

Monroe.—Portland 10; Angelo 4; La Fayette 4; Adrian 2; Tomah 5; Ridgeville 4, ... 29

Oconto.—Marinette 5; Stiles 3, ... 8

Outagamie.—Hortonia 2; Medina 1; Appleton 2; Embarras 2, ... 7

Ozaukee.—Cedarburg 1; Fredonia 1, ... 2

Pierce.—Diamond Bluff 1; Trim Belle 4; Greenwood 3; Perry 2; Pleasant Valley 3, ... 13

Amount, ... 359

Brought forward,	359
Polk.—Alden 3,	3
Portage.—Stevens Point 12; Amherst 4; Almond 6; Stockton 8; Lanark 5; Buena Vista 5,	40
Racine.—Racine 4; Burlington 2,	6
Richland.—Rockbridge 2; Marshall 4; Dayton 8; Eagle 6; Henrietta 5; Akan 2; Bloom 4; Richland 6; Buena Vista 2; Sylvan 6; Westford 5; Willow 6,	56
Rock.—Harmony 1; Newark 9; Beloit 2; Clinton 1; Rock 1,	14
St. Croix—Ceylon 2; Hudson 2; Erin Prairie 3; St. Josephs 1; Hammond 4; Richmond 3; Somerset 1,	16
Sauk.—Woodland 2; Freedom 5; Fairfield 1; Baraboo 1,	9
Sheboygan.—Mitchell 2; Herman 1; Plymouth 1; Lima 2,	6
Trempeleau.—Preston 4; Arcadia 1; Trempeleau 5,	10
Walworth.—Sharon 12; Linn 2; Delavan 2,	16
Washington.—Hartford 4,	4
Waukesha.—Oconomowoc 2,	2
Waupaca.—Iola 2; Scandinavia 5; Weyauwega 5; Lind 3; Union 3,	18
Waushara.—Oasis 3; Bloomfield 3; Hancock 7; Deerfield 2,	15
Winnebago—Winchester 2; Oshkosh 2; Algoma 1,	5
Pepin.—Waubek 4,	4
Juneau.—Lemonweir 1; Germantown 4; Seven Mile Creek 4; Lindina 2; Armenia 2,	13
Green Lake—Seneca 4; Green Lake 1; Berlin 3; Markesan 1,	9
Wood.—Dexter 3,	3
Eau Claire.—Bridge Creek 2; Halfmoon 4,	6
Total,	613

Supt. of Pub. Instruction in acc't with State of Wisconsin.

1859.		*Cr.*	*Dr.*
Feb. 7th.	To Dictionaries on hand at the settlement with Investigating Committee of the Legislature,		7
Aug. 1st.	Dictionaries purchased as per act of Legislature, approved March 17, 1859,		600
"	Dictionaries returned by L. Lee, Kenosha,		6
	Distribution of Dictionaries as above (613) as per vouchers in the office of this Department,	613	
Total,		613	613

LYMAN C. DRAPER.
Supt. of Pub. Instruction.

NOTICE.

TOWN Superintendents are earnestly desired, immediately upon the annual election, to send the names of the newly elected Clerks, either to the editor of the Journal of Education, or to this department, that the address of the Journals may be changed accordingly. Town Superintendents and District Clerks can be supplied with the new School Law upon application. The laws will be sent by Express to all available points, and by mail to towns where there is no Express line.

S. H. CARPENTER,

MADISON, Sept. 17, 1859. *Assistant State Supt.*

TEACHERS' INSTITUTES FOR 1859.

IN compliance with invitations received, and with the assurances that suitable local arrangements will be made, a TEACHERS' INSTITUTE will be held as follows:

At Elkhorn, commencing	Monday evening,	October 3d.
" Sheboygan,	" "	" 3d.
" Waupun,	" "	" 10th.
" Appleton,	" "	" 10th.
" Mineral Point,	" "	" 17th.
" Richland,	" "	" 17th.
" Galesville,	" "	" 24th.
" River Falls,	" "	" 24th.
" Eau Claire,	" "	" 31st.
" Baraboo,	" "	" 31st.
" Milton,	" "	November 7th.
" Kenosha	" "	" 7th.
" Beloit,	" "	" 14th.
" Madison,	" "	" 21st.

Each Institute will be opened on the Monday evening named above with an address on the subject of Public Instruction, and will close on the Friday evening following.

During each day there will be exercises, conducted by competent and experienced teachers, illustrative of the principles and methods of education applicable to public schools of different grades.

Each evening will be devoted to an address, or discussions on some educational subject, which the public generally are invited to attend.

Teachers, or those who are preparing to teach, who enroll their names as in attendance on Monday evening or Tuesday morning, will be provided with a home during the session of the Institute. The place of meeting will be announced in the local papers.

HENRY BARNARD,

ADISON, Sept. 19, 1859. *Agent of Regents of Normal Schools.*

Mathematical Department.

EDITOR JOURNAL:—In the August number of the *Journal* Mr. Ingalls gives us $y^3=2pwz$ for the equation of a parabola. He states that w and z, in this equation, are functions of x, and that the equation contains three variables. If w and z are each functions of x, then $wz=f(x)$, and we get $y^2=pwz=2pf(x)$, and there are, in reality but *two* variables. Again, the law of relation between the ordinate and abscissa of a parabola is this: the square of the ordinate varies as the abscissa. Now, if $y^2=2pwz$ be the equation of a parabola, y^2 varies as the product wz, and therefore, by the above law, we must regard this product as a symbol representing the abscissa, and, as above, the equation contains only two variables. In my solution of problem 6, I deduced the equation $y^2=(x^2a^2)$ tan. A tan. A^1, and stated that it was the equation of an hyperbola. Mr. Ingalls says this equation can be made to refer other curves, and in proof he deduces $y^2=(x^2R^2)$ tan. A tan A^1 from a circle, when the origin is at one extremity of a diameter. The two equations are certainly of the same form, and this clearly indicates that their loci are curves of the same class. As his equation refers to one of the conic sections, mine must also refer to one of the same curves; but the particular one of the conics which each refers to will depend upon the constants in each. The constants in the two equations differ materially. In my equation, a represents the distance from the origin to where the curve cuts the axis of x; in his equation this distance is zero, and a, in my equation, vanishes in his; and the constant R of his equation, has no corresponding constant in mine. It is often the case that the same form of an equation will give different loci for different values assigned to its constants. Thus: $y^2=mx+nx^2$ may be made to refer to each of the conic sections, by giving m and n proper values. In like manner, the equation $a^2y^2+b^2x^2=2b^2ax$ may be made to refer to a circle, an elipse, an hyperbola, or even a parabola, by giving a^2 and b^2 proper values. I hope before closing this article to so far trace the locus of my equation as to put its identity beyond dispute.

If Mr. Ingalls will refer to pages 112–115 of Robinson's Analytical Geometry, he will find exceptions to the "universal custom" of accenting

or otherwise marking the co-ordinates of a particular point. Accenting need only be resorted to when it is necessary to keep the particular co-ordinates distinct from the general ones; but this is not necessary in eliminations, and so I did not resort to it.*

In my solution, the equation

$$y^2=(x^2-a^2)\tan. A \tan. A^1 \quad - - - - - - - - - - - (1)$$

was obtained by multiplying $y=x+a \tan. A^1$ - - - - - (2)

into $y=(x-a) \tan A$ - - - - - - - - - - - - - (3)

Let x and y be the same in both (2) and (3). In (2) and (3) we cannot have the condition tan. A = tan. A^1, for this would give $x+a=x-a$, which is absurd; hence, tan. A and tan. A^1 cannot both reduce to zero for the same values of y and x. The result of this is, that when $y=0$, we also have tan. $A^1=0$ in (1), and $(x-a)=0$ in (3), and therefore $(x^2a^2)=0$ in (1). That is, when $y=0$, $x=+a$. Hence, the locus cuts the axis of x in two points, which are at equal points from the origin C, (see diagram in Jan. No.), but in opposite directions. The curve cannot, therefore, be a parabola. Again, the curve cannot be an ellipse, for if it was, a^2 would necessarily be positive. As we have shown the curve to be a conic section, and also shown that it is not a circle, an ellipse, or a parabola, it must be an hyperbola. Aside from this, all real values of x, greater than +a, gives two real and equal values of y—one positive and the other negative. Hence, the curve is symmetrical with reference to the axis of x, and extends indefinitely to the right of A, and to the left of A^1. If we solve the equation with reference to x, we shall find that every real value of y gives two real and equal values of x—one positive and the other negative. This shows the curve to be symmetrical with reference to the axis y. Of all the curves whose equations are of the second degree, the hyperbola alone enjoys *all* these properties.

In conclusion, I will state that I believe my method of solving problem 6 will also apply to its modification, as given by Mr. Ingalls. Of course the modification changes some of the constants, and this may change the *form* of the locus, but not its *order*.

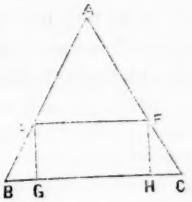
WATERFORD, August, 1859. A. W. WHITCOM.

Another Solution of Problem No. 26.—Let $3w$=weight of stick, and let x=Ah and Bh distance from the end. Conceive the weight concentrated at the point of gravitation, which is the centre, then will

*Mr. Ingalls' criticism on Mr. Whitcom's revised formula for correcting the hyperbola was founded on some typographical errors in the solution given, and therefore no t exactly legitimate, though called for by the solution as published.—ED. JOURNAL.

$\frac{1}{2}\times w=(\frac{1}{2}-x)\times 2w=lw-2lx$. Clear of fractions, unite and transpose the term, we have $4xw=lw$, $\div w$ we have $4x=l$, or $x=\frac{1}{4}$; then the bearing pole will be $\frac{1}{4}$ the length from the end opposite of C. D. WOODWARD.

Solution of Problem No. 23.—Let ABC be the triangle, and EFGH the rectangle. To make the question general, place the area of the triangle $=a$, the base BC$=b$, then $\frac{2a}{b}$=the altitude. Let



x=the altitude ofthe triangle AEF, then $\frac{2a}{b}-x=$ EG=FH=the altitude of the rectangle. By the similar triangles ABC and AEF we have $\frac{2a}{b} : b :: x : EF$. Hence $\frac{b^2x}{2a}$=EF=GH=the base of the rectangle. Therefore $\frac{b^2x}{2a}\left(\frac{2a}{b}-x\right)=$ the area of the rectangle. Now by placing $\left(\frac{2a}{b}-2x\right)bx=0$, we find $x=\frac{a}{b}$

Hence $\frac{2a}{b}-x=\frac{a}{b}$ and $\frac{b^2x}{2a}=\frac{b}{2}$. Therefore $\frac{bx}{2a}\left(\frac{2a}{b}-x\right)=\frac{a}{2}$.

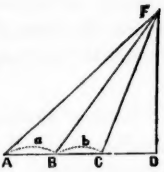
From the above we learn that the altitude of the rectangle=half the altitude of the triangle, the base of the rectangle = half the base of the triangle, and the area of the rectangle half the area of the triangle.

In problem 23 a=84 sq. feet hence $\frac{a}{2}$=42 sq. feet, the area of the rectangle required L. CAMPBELL.

Problem No. 30.—A and B set out for the same place, in the same direction. A travels eighteen miles per day, and after nine days turns and goes back as far as B has traveled in nine days; he then turns again and overtakes B. twenty-two and one-half days from the time they first set out. At what rate did B travel?

Problem No. 31.—A gentleman wants to ride from the city of C to the city of D, the cities being a miles apart. Now, from C to A, which is b miles, or from C to any place B, in the road D A, which is perpendicular to the road AC, he can ride after the rate of c miles an hour; but from A to D he can ride faster, or after the rate of d miles an hour. To find B, the place to which he must directly ride in order to perform his journey in the least possible time.

Problem No. 32.—Three right triangles FAD, FBD, FCD, being superposed, there are given the following relations: The perpendicular FD is common; the base of FAD exceeds the base of FBD by AB=a; the base of FBD exceeds the base of FCD by BC=b; the angles FAD and FBD are complementary, and FAD is double FCD; required the area of each triangle.



A. W. WHITCOM.

Editorial Miscellany.

WE give this month a part of Prof. Larkin's address, and Miss Bissell's essay, read before the State Teacher's Association. They will repay a careful perusal. We hope to give, ere long, a portion of Prof, Butler's admirable lecture on the Study of the Classics.

We commend to teachers, especially to those engaged in primary schools, the article in the present number on "The True Order of Studies," by Rev. Thomas Hill, of Waltham, Mass. It is taken from Mr. Barnard's Journal of Education, and is a part of one of a series on the same subject. Those who have read the portion heretofore published in the Journal will be prepared to appreciate, and we think, agree with the author in his treatment of the subject. Mr. Hill has been chosen to the Presidency of Antioch College, and, after Dr. Bellows, who was designated by Mr. Mann as his successor, there is no one better fitted to take the place made vacant by the death of the great apostle of popular education.

DISTRICT CLERKS and Town Superintendents will do the districts under their charge a favor by forwarding the names of the newly elected clerks to this office with as little delay as possible.

TEACHERS' INSTITUTES.—It will be seen that Chancellor Barnard has arranged a series of Institutes to be held in different localities in the State during October and November. He has secured several competent gentlemen to assist him in the work, and it is expected that there will be a large attendence of teachers, and that much good will be done in elevating the standard of qualifications of teachers, and arousing the people to the importance of securing all the benefits which may be derived from our system of free schools.

NORMAL DEPARTMENT IN HIGH SCHOOLS—TEACHING AN ART AS WELL AS A SCIENCE.—We find in the Racine Advocate a communication from Mr. McMynn to the Board of Education of that city, on the subject of normal instruction, and it contains so much sound sense, and is so applicable to every similar case, that we quote a portion of it:

"We may remark that in organizing this department there are two courses, either of which we may follow. The first and easiest is to signify to the Board of Normal Regents that a normal department has been organized; to transfer from the register of the high school to the register of the normal department the names of such as can be induced to express a wish for normal instruction; to change the names of some of some of our classes, and slightly modify our methods of recitation; to prefix names to the lectures now given daily, so as to meet the requirements of the Normal Board, and then fill up the blanks and verify by oath a statement, as true of our high school during the past three years, as of some of those institutions that have drawn hundreds or thousands of dollars from the treasury of the State. If the future is to be as the past, we would thus fulfill the requirements of the Board, and receive our share of the fund.

"The other course is different. Our action would be based on the fact that teaching is both a science and an art. The science may be taught by instruction but the art must be learned by practice. One who knows only the science is no more a teacher than one who understands the laws of light is an oculist. The college, academy, and high school, as such, must fail in the effort to teach teaching. They may teach much that a teacher must know, but they cannot teach him what he must do. Who could become a painter by listening to lectures on the works of Reubens and Vandyke, or a sculptor by hearing descriptions of the master-pieces of Thorwaldsen and Powers?

"We are able to furnish for observation and inspection a system of schools, capable of improvement, it is true, but still coherent and harmonious. It is not enough to see the teaching done, but he who would understand it must do it. He who would learn how to govern a school, must govern it. All the Board of Regents require at present, is, that certain instruction should be given in the science; but we possess the means of instructing also in the art. The Training School is all-important—a school where the normal candidate may apply his knowledge, and, under the direction of a clear head and a quick eye, may learn the art of teaching. To make a swordsman, we do more than lecture on the construction, temper and polish of the blade; we teach the hand to hold and the arm to wield it. Now, while we admit that the science of teaching may be taught without the model school, in which the student is to practice, we cannot see how it is possible to teach the art. And we think our system embraces the model schools, or, at least, those which, properly improved, may become so. We have all departments, the primary, intermediate, grammar, and high school, in which students may be trained, and where they may learn the art, in the only way an art can be learned—by practicing it. What we ought to do, then, is to develope a training school, where teaching shall be taught."

These are correct views; and we learn that at Platteville, Palmyra, and some other places, the normal students are required to take charge of classes daily, and thus learn the art, as well as the science, of teaching.

EDUCATION IN IRELAND.—The 24th Report of the Commissioners of National Education in Ireland, shows that at the end of 1857 there were 5,337 schools in operation, an average daily attendance of 268,187 children, the average number in the rolls being 514,445. There were thirteen district model schools, and 106 national agricultural schools. The total receipts of the commissioners amounted to £302,224, and their expenditure to £269,425.

AMERICAN BOOKS.—Mr. Hilliard, in a letter from Liverpool to the Boston Courier, states that in the examination of travelers' luggage by the officers of customs, American reprints of English books are absolutely excluded; they are taken away and destroyed. Thackeray was in this way deprived of his copies of the Appleton's reprints of his own works.

MINERAL POINT.—We learn from the city Superintendent, R. D. Pulford, Esq., that the public schools will open about the first of October, under the charge of Alexander Wilson, Esq., as principal, and Miss Henrietta L. Proseus and Miss Celeste L. Minor, assistants. The new building for the high school will be ready for occupation, and the other rooms put in good condition. The graded system will be adopted, and it is to be hoped that our citizens will lend what aid they can in sustaining this course. A normal department will also be instituted in connection with the higher department.—*Tribune.*

MILWAUKEE.—From the late school canvass, we learn that the number of children between the ages of four and twenty years is 14,933, of which there have been in attendance at school the past year in the public schools 7,299, and in private schools nearly 2,000, making in all nine-fifteenths of the whole number.

RACINE.—The whole number of pupils reported as attending the public schools of this city, for the year ending July 5th, 1859, is 2,276, of which number 1177 were males, and 1099 females, distributed as follows: in the high school 174, grammar schools 520, intermediate 234, and primary 1348.

PRESCOTT, Pierce Co.—A new school-house is in process of erection in this place. The building is to be 36 by 54 feet, two stories high, and is to be completed by the 1st of November at a cost of $4,500.

NEW EXCHANGES.—We have received No. 1 of Vol. 1 of *The Journal of Education*, published monthly at Richmond, Tenn., by C. L. Randolph, who is the principal editor, assisted by H. H. Harris and C. R. Darnell; terms $1.50 per annum, in advance. The Journal is to be devoted to the discussion of the subject of the government of schools, best plans for imparting instruction, text-books, location and construction of school-houses, the relative duties of parents, teachers and students, etc., etc. We wish it much success.

We have also received a prospectus of a journal to be issued this month at Louisville, Ky., under the patronage of the Kentucky Association of Teachers, and edited by E. A. Holyoke, assisted by a number of competent gentlemen, It is to be named *The Educational Monthly*, and to be devoted to Education, Science, Art, and Literature. Subscription price $2.00 a year. Address E. A. Holyoke, Resident Editor, Louisville, Ky.

Life Illustrated.—We have before commended this valuable paper to our readers, and again call attention to it as a substitute for reading books for the more advanced pupils in our schools. It presents a great variety and amount of useful matter, is profusely illustrated with views of buildings, machinery, etc., accompanied by descriptions, and cannot fail in interesting children, as well as adults. A series of articles entitled "The Builder," is now in course of publication in its columns, in which instruction is given in practical architecture, embracing designing, drafting, masonry, carpentering, plumbing, painting, roofing and ventilating, with drawings, plans, and other illustrations, and they are worthy of a careful perusal by every one who wishes for information on this important subject. Published weekly by Fowler & Wells, 308 Broadway New-York, at the following rates: single copy one year $2.00; three copies $4 00; five copies $6.00; ten copies $10.00. It will be sent to new subscribers, in clubs, three months for 25 cents.

The College Journal of Mecical Science.—We have hitherto neglected to notice this valuable exchange, not because we were insensible of its merits, but because of a want of room, and the pressure of other matter. Though out of the direct line of educational effort, as connected with our common schools, the teacher will find much in its pages to assist him in the proper performance of one part of his duty, the discipline and development of the physical nature of the children under his care; and it will be a great advance in the standard of qualifications of teachers, when they shall be expected to know something of physiology, anatomy, the nature of disease, and the operation of medicines. The College Journal is ably edited by Professors King, Sherwood, Cleveland, Howe, St. John, and Judge of the Eclectic College of Medicine, Cincinnati, and, while designed mainly for the profession, contains a great amount of valuable information suited to the capacities and wants of the professional reader.

The winter session of the Eclectic College commences on the 10th inst., at Cincinnati, and continues sixteen weeks. Terms as follows: Matriculation $5 00; Tuition $20 00; Demonstrator's Ticket $5 00; Gradnation $25 00. Tickets for the session may be obtained of John King, M. D., Dean of the Faculty, at his office No. 85 Eight st., or of Prof. C. H. Cleveland, Secretary of the Faculty, No. 139 Seventh st., near Elm.

Fond du Lac.—The fall term of the public schools commenced on the 1st inst.

Lancaster, Grant Co.—The people of this enterprising village are building a new union school house which is to cost $10,000.

WISCONSIN FARMER.—The September number of the Farmer is very interesting and valuable, presenting a great variety of articles, suited to the taste and capacity of every class of readers. It ought to be taken by every family in the State, as, notwithstanding its name, and the fact that it is principally devoted to agriculture, it treats of horticulture, domestic economy, education, etc., and is worth ten times what it costs to any thinking man or woman who wishes to know the best methods of doing everything connected with agriculture, horticulture, and gardening. We furnish it with the Journal at 75 cents a year.

THE LADIES' HOME MAGAZINE for October is received, and is as interesting as ever. "Wait and See," by Miss Townsend, is finished, and there are several other good articles. The engraving this month is entitled "The old Soldier and his family," and is quite a study. When preparing to subscribe for Magazines for next year, our readers will do well to examine this one, as we feel confident that they will like it.

WAUPUN.—Wm. Euen & Co., the enterprising publishers of the *Prison City Item*, have devoted a portion of their paper to educational topics, and have put that department under the charge of a practical teacher,—a good example for others to follow.

NEW-YORK.—The New-York State Teachers' Association held its fourteenth annual session at Poughkeepsie, on the 2d, 3d, and 4th inst. The followtng persons were chosen officers for the ensuing year: *President*—James N. McElligott, LL.D., New-York. *Vice Presidents*—Jas. Johonnot, Syracuse; W. N. Read, Newburg; Asa Baker, Johnstown; Edwid A. Charlton, Lockport. *Recording Secretaries*—James Atwater, Lockport; G. N. Harris, Syracuse. *Treasarer*—Wm. H. Hughes, Albany. *Board of Editors for the New-York Teacher*—J. W. Bulkley, Brooklyn; E. A. Sheldon, Oswego; A. Z. Barrows, Buffalo; W. W. Raymond, Skaneateles; D. H. Crittenden, New-York; Emily A. Rice, Schenectady; Helen M. Philleo, Boonville; E. W. Keyes, Albany; A. B. Wiggin, Owego; Edward Webster, Rochester; J. W. Baker, Niagara Falls. The Association resolved to hold its next annual meeting at Syracuse. July 31st, 1860.

OUTLINE MAPS AND GLOBES.—The value of Maps and Globes as aids in studying and teaching geography and astronomy, is well understood by all those who have had any experience in their use, or who have any acquaintance with the philosophy of the processes through which the mind is developed, and information obtained. Still many, indeed most of our schools are destitute of either maps or globes, for the reason that the authorities whose duty it is to provide these things do not realize the benefits which will flow from their use, and consequently believe that it would be a useless expenditure of money to purchase them. To such we say, you will never regret the expenditure. A good pair of globes, and a good set of outline maps in the school room are worth more in the hands of a competent teacher, to convey a knowledge of the elements of geography and astronomy, than all the text-books in use in the State. Better have one month less of school the

coming year and devote the money thus saved to the purchase of globes and maps, if they cannot be procured otherwise. We again call attention to the liberal offer made by Mr. J. H. Rolfe, of Chicago, to furnish Pelton's Outline Maps. His advertisement will be found on the 3d page of the cover, and his terms are such as to make it an object for every district to move in the matter at once. On the opposite page is the advertisement of Geo. Sherwood, who will furnish Mitchell's Outline Maps, globes, philosophical and arithmetical apparatus, and every thing needed in the school room, at fair rates. We are acquainted with both Mr. Rolfe and Mr. Sherwood, and commend them as honorable and fair dealing gentlemen. The following remarks on the use of the globes we clip from the Newark, (N. J.,) Advertiser:

"As I have recently had the pleasure of examining some five or six varieties of the Franklin Globes manufactured by Moore & Nims, of Troy, N. Y., and as your State pays not a little attention to the cause of popular education, it has occurred to me that it would not be inappropriate to make a few suggestions, with your permission, in a journal so extensively read by the educated and influential classes as the Advertiser, on what I consider the utility of globes as a means of teaching geography and astronomy in our common schools. I intended little more to day, however, than to allude to the matter, for I have already nearly filled the space which I had prescribed for my epistle. Besides it is nearly post hour, and I am by no means in the mood this gloomy, suicide-provoking weather to attempt any scientific dissertation. It were, undoubtedly, well to convince our school committees that if a globe costs ten times as much as an ordinary atlas, it is ten times more valuable. On a map we can trace a river from its source to its mouth; point out large mountains, or mountain ranges; lay our finger on a large city, etc; but if we want to know the relative distances of places from any given point on the earth's surface, their differences of latitude and longitude, the length of their days and nights, when their twilight begins or ends, we must necessarily have recourse to a terrestrial globe. Still more useful, if possible, is the celestial globe in astronomy, compared to any maps that can be drawn of the heavens Some think that in order to be able to understand the use of the globes, very profound. long-continued study is required, whereas, in point of fact, a person of ordinary intelligence could learn the whole mystery in two or three weeks."

UNIVERSITY COMMERCIAL SCHOOL.—We heartily commend this institution to our readers as worthy of their patronage. It offers superior advantages to young gentlemen who wish to obtain a knowledge of penmanship and book-keeping, and there is a separate room fitted up expressly to accommodate ladies. Now, when sewing-machines and other inventions threaten to deprive them of a portion of their customary resources, they will see the propriety of enlarging their sphere of action by making themselves acquainted with penmanship and book-keeping. The Principal, Mr. Tullis, is a gentleman of the highest character, and competent to fill the place he occupies, as we can testify from witnessing the improvement made by pupils under his care. For terms see advertisement.

BOOK TABLE.

A NATURAL PHILOSOPHY, embracing the most recent discoveries in the various branches of physics, and exhibiting the application of scientific principles in every day life, adapted to use with or without apparatus, and accompanied with full descriptions of experiments, practical exercises, and numerous illustrations, by G. P. Quackenboss, A.M., Principal of the Collegiate School, N. Y., author "Course of Composition and Rhetoric," "History of the United States," etc, New-York: D. Appleton & Co., 346 and 348 Broadway; 1859.

This work is entitled to a prominent place among the treatise on natural philosophy. It is distinguished by methodical arrangement, clearness of statement, and fullness of illustration. The mechanical execution is all that could be wished for, and the size and price put it within the reach of all who ought to study it.

MODERN PHILOLOGY, its discoveries, history and influence, with maps, tabular views, and an index. By BENJAMIN DWIGHT, author of the "Higher Christian Education." New-York: A. S. Barnes & Burr, 51 and 53 John St. 1859.

The science of Philology—which, by most scholars, has been too much neglected in the past—is assuming so much importance, not only as it regards its own particular department of investigation, but on account of its relations to historical and geographical questions, and the light which it throws upon the discussion of the great problem of the unity of the race, that every person making any pretensions to liberal culture must make himself acquainted with its principles—must be able, partially, at least, to trace its relations, and comprehend its results. As an elementary work—one fitted to awaken interest, excite inquiry, and convey information—this book has no equal in this country. It is distinguished for attractiveness of style, extensive research, philosophical discrimination and analysis, and an earnest, candid spirit. The investigations, the results of which are given in this work, were undoubtedly a labor of love on the part of the author, and we quote the following from the introduction as evidence of his earnestness and zeal: "The author has written what he has, because he must; necessity has been upon him; the fire kindled within his own heart has found vent; he could not keep to himself the pleasure that he constantly experienced in his pathway of investigation." With reference to the future of this science, he says: "The author loves to look hopefully upon the sure and speedy progress of American scholarship to heights of attainment almost unthought of now. We are not to be always spoken of as mere borrowers of others, and as accomplishing, at the best, only superficial results. There is in the qualities of activity, enterprise, ingenuity, and endurance, that distinguish us as a people, a substantial preparation for the highest scientific and artistic development of the American mind and character, in all the varied departments of scholarly acquisition. So many of our finest minds are not, ere long, to be led, as now, like oxen garlanded for the sacrifice, to the altars of mammon; and American scholarship, like American literature, which has hitherto surpassed it in the signals of its growth and greatness, that it has waved exulting before the nations, is to stand up in the highest proportions, attained among any people, for breadth, and strength, and beauty of aspect, in the light of an admiring world." The work is divided into three parts: 1st. An Historical Sketch of the Indo-European languages; 2d. The History of Modern Philology; and 3d. The Science of Etymology, followed by two Philological Maps, one of Europe, and one of Asia, showing at a glance the countries in which the different languages are spoken. In type, paper, and binding the book is worthy of its subject, and does credit to the publishers. We hope and believe it will have a wide circulation.